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EXAMINER	
LUONG, ALAN H	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/665,426	MORI ET AL.	
	Examiner	Art Unit	
	ALAN LUONG	2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Based on interview on 12/12/2008, Examiner considers to remove Alexandre reference and add new reference as Hannuksela et al. (60/396489).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1-7, 9, 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiba (US Patent No. 6,604,215 hereinafter Chiba); in view of Furuya et al (US Patent No. 6,452,943, hereinafter Furuya) and in view of Takashi et al. (JP 2002-0844471 hereinafter Takashi), further in view of Hannuksela et al. (US Pub 2004/0139462 hereinafter Hannuksela whereby the provisional application (60/396489) referenced for purposes of priority).

Regarding to claim 1: Fig. 1 of Chiba illustrates an integrated receiver decoder as **a receiving apparatus** (**see Chiba, col. 3 lines 52-54**) comprising:

Antenna [2] as **reception means for receiving data on a stream broadcast via a network** (defined in col. 1 lines 15-25); (**see Chiba, col.3 lines 56-59 and col.4 lines 35-45**);

a buffer **memory** (53 of Fig. 1) **which is capable of storing a predetermined amount of the received data on a stream broadcast**; (receiver, when receiving a

multichannel digital satellite broadcast, a demultiplexer [52] first detects section data and the detected section data are temporarily stored in a buffer memory connected to the demultiplexer; **see Chiba, col.1 lines 46-51 and col.4 lines 48-50**)

Chiba also teaches **data processing means** [4] **for processing the data on a stream broadcast stored in the memory** [53**] to generate video data for the stream broadcast** (referring to Fig. 1, the microcomputer 4 controls the operation of the whole IRD includes the FEC decoder 33 subjects signal supplied the QPSK demodulator 32 to FEC processing to generate a transport stream, and delivers it to the transport section 5 where outputs to demux [52] which extracts the section data from transport stream to store them in buffer memory [53] and at demux [52] video data is decoded by video decoder [62] and encoder [64] for display (**see Chiba, Fig. 1, col. 4 lines 6-64**);

video output means [64] for outputting the video data to a display apparatus; (The NTSC encoder 64 converts the video data to be inputted to NTSC video signals, and outputs them to an external monitor; (**see Chiba, col. 4 lines 20-28 and 62-64**).

detection means (in form of a FEC decoder [33 of Fig. 1]), **for detecting interruption point data** (i.e. C/N ratio**) indicating a position where reproduction of the stream broadcast should be interrupted out of the received data on a stream broadcast wherein the interruption point data are incorporated in the data on a stream broadcast** (Referring to Figs. 2, 3A to 3G, FEC decoder generates BER data

and delivers to the microprocessor [4]) (**col. 4 lines 4-5)** where decides the a lock/unlock signal supplied from demod [32] based on C/N ratio change as indicator for reception impossible or impossible to display pictures (Figs. 3A-3C) or reception possible or possible to display pictures (Figs. 3D-3F); and section data are stored in buffer memory or are acquired in used for channel selection (**see Chiba, col. 5 lines 7-50 and Figs. 6A to 6F, col. 2 lines 23-54**)

However, Chiba is silent to "the video data stored in the memory wherein outputting from the memory and storing into the memory the video data are simultaneously performed by controlling the memory so as to conserve a predetermined amount of buffering of the video data; control means for (a) monitoring abnormality of communication by detecting whether the amount of buffering of the video data gets under a predetermined level,

In an analogous art directed toward a similar problem namely improving the results from "the memory wherein outputting from the memory and storing into the memory the video data are simultaneously performed by controlling the memory so as to conserve a predetermined amount of buffering of the video data". Referring Fig. 17 of Furuya illustrates a video server system that discloses **the video data stored in the memory** as reception buffer [402] **wherein** video reproduction **outputting from the memory and the video data** accumulates in the reception buffer by **storing into the memory are simultaneously performed by** type of control data that **controlling the memory so as to conserve a predetermined amount of buffering of the video data** (the type 3 control data being used until an amount of data in the buffer memory decreases to a

certain amount of 4MB, wherein when the detecting unit detects that one of an overflow if the buffer memory increases to a certain amount of 6MB and an underflow the buffer memory decreases to a certain amount of 2MB appears possible) **(Furuya, col. 6 line 65 to col. 7 line 67 and col. 17 line 34 to col. 18 line 40**).

Further, Furuya teaches type 3 control data as **control means for (a) monitoring abnormality of communication by detecting whether the amount of buffering of the video data gets under a predetermined level**, (Since there are changes in the amount of expendable data in the reception buffer 402 of the receiver 400, this amount is monitored using a read pointer and a write pointer as in the video server system (see FIG. 12) (**col. 10 lines 54-61 and col. 11 lines 46-64**). If, while the reproduction processing is being performed, the amount of expendable data in the reception buffer (i.e. the amount of video data indicated by the difference between read pointer and the write pointer) reaches one cycle (2 MB) of video data, it is judged that an underflow may occur. Conversely, if the amount of expendable data in the reception buffer reaches three cycles (6 MB) of video data, it is judged that an overflow may occur). **(Furuya, col. 16 line 62 to col. 17 line 6**) Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention was made to modify a receiving apparatus of Chiba with reception buffer as taught by Furuya in order to provide the process to ensure underflows and overflows do not occur in the reception buffer of receiver places an excessive load on the entire system.

Neither Chiba nor Furuya teaches (b) controlling, when the abnormality of the communication is detected, the data processing means and the video output means to

(i) continue the output of the video data from a position at which the abnormality is detected to a position instructed in the interruption point data detected by the detection means, so as to display on the display apparatus a video image based on the video data, and

(ii) stop the output of the video data at the position instructed in the interruption point data.

In an analogous art directed toward a similar problem namely improving the results from controlling the memory so as to conserve a predetermined amount of buffering of the video data. Drawing 3 of Takashi illustrates a receiver section includes **control means [37]** receives control line [C21, C22 and C23] from **abnormalities detection means** [IF block 33, stream decoder 32 and image decoder 31], respectively (Takashi, ¶0007-¶0010). Block [37] is. **control means for (a) monitoring abnormality of communication** by the failure detection signal [C24] to determine input to sw [34] which changes image [D5] output from detection means [31] and sw [35] which turns ON when memorizes updating image [D5] in memory [36] and OFF, memory [36] is updated based upon a stored data amount of the memory [36] **(Takashi, ¶0022-¶0024)**

when the abnormality of the communication is detected to be determined by the failure detection signal [C24] at any blocks [31], [32] and [33]**, controlling the data processing means** [37] controls sw [34] as **the video output means** outputs the image data [D7] **and the video output means to continue the output of the video data** [D9] which is memorized in memory [36] from sw [34] **at which the abnormality is**

detected to a position of stream decoder **[**32] by control line [C22] which **instructed in the interruption point** as the predetermined static image data is displayed **when the abnormality of the communication is detected,** the video data [D5] is memorized in memory [36] at the same time with [D6] when sw [35] switches ON/OFF, **in the interruption point** where the control means [37] receives control line [C23] monitoring **data detected by the detection means** [31] are no longer supplied to memory [36] then the stored data amount of the memory [36] are not updated, **so as to display on the display apparatus a video image** [D7**] based on the video data** [D5], **(Takashi, ¶0023-¶0024)** meets the limitation of **"when the abnormality of the communication is detected, the data processing means and the video output means to (i) continue the output of the video data from a position at which the abnormality is detected to a position instructed in the interruption point data detected by the detection means, so as to display on the display apparatus a video image based on the video data"** and

(ii) where the control means [37] receives failure detection signal [C24] monitoring **data detected by the detection means (**at least one of [31], [32] and [33]), switch [35] in OFF state, image decoding data confused to **stop the output of the video data at the position instructed in the interruption point data** as the predetermined static-image data is displayed **.** (**Takashi, ¶0025-¶0026**)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention was made to modify a receiving apparatus of Chiba with a control means for monitoring abnormality of communication as taught by Takashi, in order to

prevent the output of the disordered decoding image is displayed with the desired image from user, giving a user displeasure is lost.

However, Chiba, Furuya and Takashi explicitly fail to teach "detecting scene partitions of a program on the stream broadcast at the interruption point data indicating a position where are incorporated in the data on a stream broadcast relating to scene partitions of a program.

In an analogous art directed toward a similar problem namely improving the results from detecting scene partitions of a program on the stream broadcast. Fig. 8 of Hannuksela illustrates scene detection and concealing for picture lost or corrupted as a mechanism for **detecting interruption point data (**Hannuksela, **page. 2 lines 4-7) indicating a position** (scene transition type defined in **page. 7 lines 12-15**) **where are incorporated in the data on a stream broadcast relating to scene partitions of a program on the stream broadcast** (i.e. scene is associated with a scene identifier value which is used to determine scene change in decoding process); (see Hannuksela**, page. 2 lines 23-26, page. 3 lines 1-8, page. 7 line16 to page 8 line 9 and page. 9 lines 3-22).**Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention was made to combine the detecting of scene change as taught by Hannuksela with controlling for digital content reception of Chiba, Furuya and Takashi; In order to provide a perfect scene boundary detection algorithm for video restoration and coloring. **(**Hannuksela, **page. 2 lines 18-20)**

Regarding to claim 2: Chiba, Furuya, Takashi and Hannuksela teach all limitations of the receiving apparatus according to claim 1**,** Takashi also discloses that **the control means also monitors abnormality of communication based upon a stored data amount of the memory** (see Claim 1 discussion) **and a communication rate of the data on a stream broadcast by the reception means** (**Takashi, ¶0019**)

Regarding to claim 3: Chiba, Furuya,Takashi and Hannuksela teach all limitations of the receiving apparatus according to claim 2, Fig. 1 of Chiba shows **the control means** (microprocessor 4) further **controls the data processing means** (EPG processor 61; Fig. 1) and **the video output means** (NTSC Encoder 64; Fig. 1) to restart the output of the video data from the position instructed in the interruption point data in response to an amount of data of the data on a stream broadcast stored on the memory having reached a predetermined amount after stopping the output of the video data; if it decides the BER is not more than 10.sup.-10 (YES in Step S5) for example, it acquires section data (Step S6), when the C/N ratio is enhanced in the unlocked state and the BER comes down to 10.sup.-2 for example, it becomes possible for the QPSK modulator to perform demodulation, and the lock/unlock signal changes from unlock to lock (FIGS. 3D and 3E). However, acquisition of section data has not yet been done. Then, when the C/N ratio is further enhanced to 10.sup.-10 for example, section data are acquired. In this state, the FEC decoder 33 is enabled to perform error correction, and it becomes possible for pictures consisting of video data to be displayed; (**see Fig. 2, col. 4 lines 5-67 and Fig. 3D to 3G; col.5 lines 7-51).**

Regarding to claim 4: Chiba, Furuya, Takashi and Hannuksela teach all limitation of the receiving apparatus according to claim 3**,** Furuya also teaches a receiving apparatus wherein the amount of expandable data in the reception buffer memory and estimated time when the output of the video data can be restarted based upon the amount of data, which is stored on the buffer memory; (**see Furuya, col.19 line 10 to col.20 line16 and Fig. 20**).

Regarding to claim 5: Chiba, Furuya, Takashi and Hannuksela teach all limitations of the receiving apparatus according to claim 3**,** Chiba further teaches that the **detection means** further **detects restart point data indicating a restart point after stopping the video output out of the data on a stream broadcast** (It is known that the operation to switch from locking and unlocking of the IRD and vice versa, as shown in this diagram, is given a hysteretic characteristic. The hysteretic characteristic is generated by the hysteresis generator 41 in the microcomputer 4. The preferable amount of the hysteresis is 2 to 3 decibels); (**see Figs. 3B and 3F, col. 5 lines 52-58**), and **controls the data processing means and the video output means to restart the output of the video data from a position instructed in the detected restart point data** (control means for controlling the receiver so that, when the bit error rate signal has risen in level to a first value, the status signal that is outputted changes from indicating a state of possibility of reception to indicating a state of impossibility of reception; when the bit error rate signal has dropped in level to the first value, the status signal that is outputted changes from indicating a state of impossibility of reception to

indicating a state of possibility of reception); (**see col.6 lines 5-15 and col.6. lines 38-48).**

Regarding to claim 6: Chiba, Furuya, Takashi and Hannuksela teach all limitations of the receiving apparatus according to claim 1. Drawing 3 of Takashi further discloses **the control means controls the video output means to output predetermined video data instead of video data according to the data on a stream broadcast after stopping the output of the video data.** (**See Takashi, ¶0023-¶0025**).

Regarding to claim 7: Chiba, Furuya,Takashi and Hannuksela teach all limitations of the receiving apparatus according to claim 6, Takashi also teaches, **in the case in which an amount of data of the data on a stream broadcast stored on the memory has reached a predetermined amount after stopping the output of the video data** (**Takashi, ¶0008-¶0009), the control means further controls the data processing means and the video output means to restart the output of the video data from a position instructed in the interruption point data after the predetermined video data ends** (**Takashi , ¶0010).**

Regarding to claim 9: Chiba, Furuya, Takashi and Hannuksela teach all limitations of the receiving apparatus according to claim 1. Chiba further discloses that **the control means also selects the two kinds of levels of the interruption point data according to a type of a communication rate of the connected network** (**Chiba, col.6 lines 38-48**). Addition, Furuya discloses the data receiving apparatus, wherein the detection means further detects two kinds of levels of the interruption point

data out of the data on a stream broadcast (**Furuya**, **col.21 lines 11-13 and col.22 lines 52-54**).

Regarding to claim 11: With respect to the method claim 11, as discussed above since the receiving apparatus disclosed by Chiba, Furuya,Takashi and Hannuksela anticipate every structural element and its function required by the apparatus claim 1 and since this method claim 11 merely repeats the functions of claim 1, claim 11 must also be anticipated by Chiba, Furuya, Takashi and Hannuksela (**please see discussion of claim 1) and** display a video image based on the video data, and stop the output of the video data at the position instructed in the interruption point data, **see** Takashi, ¶0024)

Regarding to claim 12: With respect to the method claim 12, the scope of claim is substantially the same or slightly broader than that of the claim 1 since it requires every structural element of claim 1as discussed above since the receiving apparatus disclosed by Chiba, Furuya,Takashi and Hannuksela anticipate every structural element and its function required by the apparatus claim 1 and since this method claim 12 merely repeats the functions of claim 1, claim 12 must also be anticipated by Chiba, Furuya, Takashi and Hannuksela (**please see discussion of claim 1)**

3. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiba, Furuya, Takashi and Hannuksela; in view of Masayuki (JP 2001-359073 hereinafter Masayuki).

Regarding to claim 8: Chiba, Furuya, Takashi and Hannuksela teach all limitations of the receiving apparatus according to claim 1. Neither Chiba, Furuya, Takashi nor Hannuksela discloses wherein the detection means further detects location information of a second distribution server, which is capable of distributing data on a stream broadcast at or after the interruption point, out of the data on a stream broadcast, and the control means controls the reception means to make connection to the second distribution server when abnormality of communication is detected.

In an analogous art directed toward a similar problem namely improving the results from detecting location information of a second distribution server. Masayuki discloses a program distribution server [13] inside of a distribution site 1 (see Masayuki, Drawings 1 and 4; block 13 and 1) as **a second distribution server**, **which is capable of distributing data on a stream broadcast at or after the interruption point** (**Masayuki**, **¶0054 lines 2-4**), **and the control means controls the reception means to make connection to the second distribution server** (**see Masayuki**, **¶0041-¶0043**) **when abnormality of communication is detected**. Therefore, it would have been obvious to an ordinary skill in the art at the time of the invention was made to modify Chiba, Furuya, Takashi and Hannuksela's receiving apparatus with the second distribution server as taught by Masayuki; in order to distribute data on a stream broadcast at or after the interruption point.

7. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiba, Furuya, Takashi and Hannuksela, in view of US Patent Publication US 2003/0066078 published to Bjorgan et al.. (hereinafter Bjorgan)

Regarding to claim 10: As discussed above, Chiba, Furuya, Takashi and Hannuksela disclose a receiving apparatus substantially comprising every element of claim 1; however, Chiba, Furuya, Takashi and Hannuksela fail to disclose the data which designates a position where the stream broadcast should be interrupted after a CM ends and before a program following the CM starts, which are included in the data on a stream broadcast.

In an analogous art directed toward a similar problem namely improving the results from a position where the stream broadcast should be interrupted after a CM ends and before a program following the CM starts. Bjorgan discloses the commercial detector interface to insert a CM in the primary stream broadcast **(see Bjorgan para.[0041], [0042] and para.[0078] lines 32-41)**. Therefore, it would have been obvious to an ordinary skill in the art at the time of the invention was made to insert a CM in the data on a stream broadcast as taught by Bjorgan in Chiba, Furuya, Takashi and Hannuksela system, in order to prevent the interruption of video reproduction when the abnormalities are detected.

Response to Arguments

4. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Applicants respectfully submit none of Chiba, Takashi (JP '471), Masayuki (JP '073), Furuya, Bjorgan, et al., and Alexandre, et al., even in the proposed combinations, assuming, *arguendo,* that such could be combined, discloses or suggests at least the above-discussed claimed features

5. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Chiba teaches a receiving apparatus using C/N ratio as interruption detector, C/N ratio is well known in the art in order to monitor performance of receiver. Combine with Chiba, Furuya discloses buffer memory for temporally storing video data and reproduction video, by comparing the stored video data to the predetermined amount of video data at certain level is controlled by control data from device connected with, that detects the underflows and overflows the load to receiver apparatus causing interruption possible. Addition, Takashi teaches at Abnormalities detection when picture to be displayed or stop displayed depending on memorized video data in memory to be updated that causes viewer to be unpleasured for watching picture when abnormality is detected. Furthermore, Hannuksela teaches scene identifier where scene transition type happening; it locates position of lost picture Frame (Example picture lost, Fade-In/ Fade out etc.. for conceal the picture frames). Therefore, it would have been obvious to one with ordinary skill in the art by combining or modifying the teachings of the prior art to produce the claimed invention.

Therefore, after a careful consideration of the arguments presented, the Examiner must respectfully disagree for the reasons that follow, maintain the grounds of rejection versus the previously claims, after amended claim 1, new ground rejection are updated with Hannuksela as the new reference and clarify the rejection with same Chiba, Furuya, Takashi.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN LUONG whose telephone number is (571)270-5091. The examiner can normally be reached on Mon.-Thurs., 8:00am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ALAN LUONG/
Examiner, Art Unit 2427

/Scott Beliveau/

Supervisory Patent Examiner, Art Unit 2427